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| EXAMINER |
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O HERN, BRENT T

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1772

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/527,953 | Applicant(s) ZIEGLER ET AL. | |
| | Examiner Brent T. O'Hern | Art Unit 1772 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) 2, 4, 8, 9 and 12 is/are objected to.
- 8) ☒ Claim(s) 20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>14 March 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election **without traverse** of Group I, claims 1-19, in the reply filed on 19 May 2006 is acknowledged.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05).
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).**
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

Applicant has failed to provide section headings, such as a heading for the figures on page 2 of the specification. Correction is required.

Claim Objections

3. Claims 2, 4 and 12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for **failing to further limit** the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. These above claims contain process, optional and statement of use language that do not further limit the limitations of the product.
4. Claim 8 is objected to because of the following **informalities**: Applicant states “**mass 6)**” in line 2. This appears to be a typo.
5. Claim 9 is objected to because of the following **informalities**: Applicant states “**shaping**” in line 2, perhaps the applicant meant “shapes”.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2, 4 and 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase “characterized in that **points** of introduction of external force are formed by means of **shapings** of a the long-fiber-reinforced **thermoplastic**, or by **shapings** of continuous-fiber profiles, or both” in claim 2, lines 1-3 is vague and

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indefinite because the applicant has **NOT** positively set forth the limitations of the **claims**.

It is unclear whether “**points**”, “**shapings**” and “**thermoplastic**” are structural limitations and if they are structural limitations what does the applicant mean by these terms. The examiner has interpreted this above phrase as not to structurally limit the scope of the claim. Furthermore, where the claim sets forth a plurality of elements these elements should be separated by indented lines (See MPEP 608.01(i) and 703(d)).

The phrases “characterised in that the **continuous fiber - profiles are arranged** in such a manner at the **intersection point**, that the continuous-fiber - profiles are **capable of being inserted into a shaping tool** for long-fiber- reinforced thermoplastic one after the other or together, and subsequently are **capable of being pressed together** with an introduced, **molten long-fiber-reinforced thermoplastic (6)** in a press for long-fiber-reinforced thermoplastic in a single step and into a one-piece component” in claim 4, lines 1-7 and “characterised in that **shapings** on the continuous-fiber profiles and **shapings** of the long-fiber-reinforced thermoplastic mass are provided **for force introductions** and **for force transmissions** between the continuous- fiber- profiles and the long-fiber-reinforced thermoplastic - mass as well as to **inserts**” in claim 12, lines 1-4 is vague and indefinite because the applicant has **NOT** positively set forth the limitations of the claims. It is unclear whether any structural limitations exist, (specifically the above **underlined** subphrases) in these above phrases. The examiner has interpreted these above phrases as not to structurally limit

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the scope of the claims. Where the claim sets forth a plurality of elements these elements should be separated by indented lines.

The terms "**thick**" and "**thinner**" in claim 13, lines 2 and 3 are **relative terms** which renders the claim indefinite. The term "thick" and "thinner" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Clarification and/or correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-14 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kagi et al. (US 6,821,613).

Regarding claims 1-2, 4 and 12, Kagi ('613) teaches a structural component made of long-fiber reinforced thermoplastic material with integrated continuous fiber-reinforcements (*col. 1, ll. 5-6 and 29-34 and FIG-8, #1*), the component comprising

at least three individually integrated, shaped continuous fiber profiles (*FIG-24(c) and FIG-8, multi horizontal and vertical profiles*);

the at least three continuous-fiber profiles running together at a location (*FIG-24(c) and FIG-8, multi horizontal and vertical profiles forming a single structure*);

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the at least three continuous-fiber profiles, at the location where they run together, defining a three-dimensionally developed intersection point (*FIG-24(c)*, #25, *FIG-8*, #1 and col. 11, l. 4);

wherein at the intersection point at least a first continuous-fiber profile lies in an upper plane of the intersection point (*FIG-8 top rib portion of structure when turned on end*),

at least a second continuous-fiber profile lies a lower plane of the intersection point (*FIG-8 bottom rib portion of structure when turned on end*), and

wherein at least a third continuous-fiber profile with a vertical extension extends continuously between the first and second continuous-fiber profiles (*FIG-8 the profile connecting the upper and lower planes*);

wherein the continuous-fiber profiles are joined together by the long-fiber-reinforced thermoplastic material at the intersection point (*FIG-24(c)*, *FIG-8* and col. 5, l. 37).

The phrase "points of introduction of external force are formed by means of shapings of a the long-fiber-reinforced thermoplastic, or by shapings of continuous-fiber profiles, or both" in claim 2, lines 1-3 is a **process limitation** in a product claim and hence given little patentable weight since patentability of a product does not depend on its method of production (see *MPEP* § 2173.05(p)).

The phrase "characterised in that the continuous fiber - profiles are arranged in such a manner at the intersection point, that the continuous-fiber - profiles are capable of being inserted into a shaping tool for long-fiber- reinforced thermoplastic one after the

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other or together, and subsequently are capable of being pressed together with an introduced, molten long-fiber-reinforced thermoplastic (6) in a press for long-fiber-reinforced thermoplastic in a single step and into a one-piece component" in claim 4, lines 1-7 and "characterised in that shapings on the continuous-fiber profiles and shapings of the long-fiber-reinforced thermoplastic mass are provided for force introductions and for force transmissions between the continuous- fiber- profiles and the long-fiber-reinforced thermoplastic - mass as well as to inserts" in claim 12, lines 1-4 are given little patentable weight since the applicant is introducing **use limitations** and non-structural **functional language** into the product claims (*see MPEP 2173 (q)*) and (*See MPEP 2173.05(g)*). Furthermore, the portion of phrase following the word "capable" in line 3 of claim 4 to the end of the claim is interpreted as optional language, thus not given any patentable weight.

Regarding claim 3, Kagi ('613) teaches a component characterised in that the three-dimensional intersection points are developed as "X"- "T"- or "L"-shaped (*FIG-11, X and T-shaped and FIG-24(c) L-shaped*).

Regarding claim 5, Kagi ('613) teaches a component characterised in that the continuous-fiber- profiles are built up out of layers with differing fiber orientations (*FIG-23(a) and FIG24(c), layers*).

Regarding claim 6, Kagi ('613) teaches a component characterised in that the long-fiber-reinforced thermoplastic mass comprises an average fiber length of at least 3 mm (*col. 1, ll. 29-34*).

Regarding claim 7, Kagi ('613) teaches a component characterised in that the continuous-fiber profiles comprise a continuous fiber reinforcement made out of glass fibers (*col. 4, l. 8*).

Regarding claim 8, Kagi ('613) teaches a component characterised in that the thermoplastic material of the long-fiber-reinforced thermoplastic mass and of the continuous-fiber - profiles consists of partially crystalline polymers selected from the set consisting of polypropylene, polyethylene-terephthalate, polybutylene-terephthalate and polyamide (*claim #7*).

Regarding claim 9, Kagi ('613) teaches a component characterised in that the continuous-fiber profiles comprise a three-dimensional profile shaping (*FIG-24(c), #25 and col. 11, l. 4*).

Regarding claim 10, Kagi ('613) teaches the component characterised in that the continuous- fiber profiles comprise a bend, a twist, a fold or a surface structuring in longitudinal direction (*See FIG-11, bends, twists and folds of structure*).

Regarding claim 11, Kagi ('613) teaches a component, characterised in that the continuous- fiber- profiles comprise differing cross-sectional shapes (*See FIG-24(c), #25, FIG-14 and col. 9, ll. 40-63*).

Regarding claim 13, Kagi ('613) teaches a component characterised in that a continuous- fiber - profile with a positioning shoulder, a thick tensile - and compressive force zone on top and underneath as well as a thinner thrust zone in between is formed, which is positioned in a rib or in a crimp wall of the structural component (*See various configurations and shapes in FIG-24(c), FIG-8 and col. 9, ll. 40-63*).

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Regarding claim 14, Kagi ('613) teaches a component characterised in that the continuous- fiber - profiles form a moment - load lever structure with a T-shaped or L-shaped three- dimensional intersection point (*FIGs-24(c), 6b and 7, an L-shape and col. 11, l. 4*).

Regarding claim 19, Kagi ('613) teaches a component characterised in that the structural component is assembled out of at least two parts welded together (*col. 5, l. 37*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 15-18 are rejected under 35 U.S.C. 103(a), as applies to claim 1, as being unpatentable over Kagi et al. (US 6,821,613).

Kagi ('613) teaches a component discussed above, however, fails to expressly teach wherein the structural component forms a single seat back with a belt connection, two-thirds rear seat back with belt connection and lock, a seat shell or a cabin floor, or a supporting structure of a car door with integrated side-crash protection.

However, Kagi ('613) teaches that its structures are used for various vehicle structures such as safety belt anchor point elements in vehicle cabins, load bearing inserts and structural components, or chasis components (*col. 4, ll. 55-61, col. 1, ll. 41-*

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46 and FIGs-24(c), 8, 15 and 25) for the purpose of providing support for demanding load-bearing structural components (col. 1, ll. 42-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made that Kagi's ('613) elements for safety belt anchor points and load bearing body components would be used for the above seat backs/seat shell, with belt connection and lock and Kagi's ('613) chasis and load bearing body components would be used as a cabin floor or supporting structure of a car door with integrated side-crash protection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTH
Brent T O'Hern
Examiner
Art Unit 1772
June 1, 2006


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

6/1/08